

Temporalities of the glitch: *Déjà Vu*

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The word 'glitch' refers to any form of electronic interference, especially those that become audible or visible in transmission. According to the *Oxford English Dictionary*, the word appeared for the first time in the 1960s as astronaut slang for a sudden surge in current. The term swiftly permeated the world of electronic as well as electrical engineering so thoroughly that now, in everyday English, a 'glitch' is any accident that is trivial enough to be overcome, creating minor disturbances without actually damaging major functions. Electro-magnetic media have always been susceptible to electric pulses and magnetic fields, often coming from the equipment they have been produced, stored or played back on. Glitches do not stop transmission: they merely make it scrappy, dirty or noisy.

Many digital artists have embraced glitches. For such artists, a glitch is evidence that control is never complete. Glitches come as a tactical revolt of the material against its organisation. To the extent that it is a refusal of the maker's intent, it is at once a material event and a moment in which authorship is in question. A film, or indeed any communication, typically establishes its source as in some way human, whether imaginary, fictional or determinate, and whether posed as equal, as dependent or as authoritative. The glitch indicates an other subject in the medium, a ghost in the machine, an inhuman in our communications.

Regardless of its internal structures and its success or failure with audiences, any film is a proposition in a wider communication: a commodity in a system of exchange. This system, which we know as The Market, in the economic discourse of neo-liberalism is deemed to be a vast and complex accumulation of exchanges that sum to a perfect expression of human affairs. Any individual film proposes itself as an act of communication within this system, as well as within the codes of filmmaking and the cultural codes it mobilises, often enigmatically, so that the perfection of communication aspired to in its

commodity form is constantly contradicted by its imperfect communication as bearer of meaning, its use value. At the same time, however, this communicative use-value is also at risk from the materiality of the audiovisual media. But since the Market cares only for exchange, these tribulations disappear in the circulations of perfect communication. This belief that the whole overcomes and assimilates all difference has a much disavowed archaeological forebear.

Some two hundred years ago, Hegel proposed the thesis of ‘the *cunning of Reason* – that it sets the passions to work for itself, while that through which it develops itself pays the penalty and suffers the loss’.¹ Each of us suffers and dies, so that Reason can pursue its own self-development. We individuals will be consumed, and the future will not come back to rescue or justify our sad existence, save as necessary sacrifice in which even our virtues played no more part than cogs in clockwork. Contemporary philosophy and ethics reject Hegel’s vision as barbarous and totalitarian, yet today we witness the return of a universal Subject of history in the form of the Market, whose self-sufficient Reason trumps all individual misery. The Market as pure Reason depends upon perfect communication. Financialisation, which no longer requires material grounds but only the ‘confidence’ of investors, reveals the increasingly communicative nature of the economy. The Subject of market communication is however not investors but the Market itself: individual investors, losses and gains are evened out in the cunning of the Market. (There is only one small difference: today the emotional and cognitive costs of marketisation have not been entirely ignored, as they were by Hegel’s Reason, because they are now operationalised as raw materials for the reproduction of a capital which, having completed its geographical expansion, now colonises the minds and bodies of its inhabitants. Whether as consumers of therapies and pharmaceuticals, or as the necessarily damaged creatives who feed the maw of fashion, the production of unhappiness is integral to the reproduction of capital).

In such perfect communication, any interruption is blasphemy. Where the world is constituted as the self-realisation of the Market, any other goal, desire, tendency or indeed any accident to the contrary is not only illicit but both shameful and doomed to failure, since no other can exist that is not the perfection of the Market. In the glitch there emerges what, from the point of view of this now dominant Subject of history, must be that unthinkable thing, evidence of an other. The pure unity of perfect communication produces its own unconscious. The unconscious of perfect communication is the glitch.

This unconsciousness of an inhuman exterior to the Market proposes itself as noise, opposed to the total signal of smooth-running communicative perfection. In the first instance, noise is the primal mediation from which communication must bootstrap itself. Electromagnetic noise fills the radio spectrum with the detritus of time, from cosmic radiation's echoes of the Big Bang to the ephemeral crackle of lightning. We may therefore understand glitches as epiphenomena of the material and temporal substrate of electronic transmission, and by extension understand the priority of dust, for example, over film, that struggles so hard to exclude it, and encourages its audiences to ignore it when it does appear. Glitch, in this perspective belongs to universal entropy against which we drag our messages into existence and strive to retain their integrity. As noise, glitch can then be seen both as primeval nature and as the entropy that threatens every act of order, every emergence of life, insofar as life is negentropic, striving against chaos, gathering materials and energy to protect itself from dissolution. This certainly was the standpoint of the first cyberneticists like John von Neuman.² At the same time, as Michel Serres argues, without this ground of random and non-human as-signifying, signification itself cannot take place.³ Not simply a raw material transformed into communication, Serres' noisy 'parasite' is no leach sucking the life of order, but the fabric on which meaning embroiders its patterns. Meaning constructs itself by distinguishing itself from the dirty, noisy world around it, which it ejects as mere environs, mere externality. Thus noise as primal as-signifying material is both subsumed and rendered of no account. Glitches then need to be acknowledged as liminal events, thresholds between

internal and external: primordial, not chronologically but pervasively: the irreducible accompaniment to the production of communicative order. Observing that 'Modern scientific technologies tend to work toward eliminating accidents', Masakai Fujihata has written that 'Complete control requires anticipating and preventing the unexpected, thus precluding any element of discovery or surprise. But for humans to remain creative, we cannot do without the stimuli of the unexpected—which is ultimately what leads us to scientific curiosity in the first place'.⁴

A problem arises however when human agents actively pursue glitches as a means to renewing creativity. Programming the unexpected is already contradictory, since, as Hugh S. Manon and Daniel Temkin point out, 'from the point of view of the file, whose genetic predispositions are rigid and fixed, there is nothing random about glitching. "Open 57904.jpg >> replace all Q with 9hJ" produces exactly the same results every time. Alternately, we could say that glitch practice is pseudo-aleatory, since results which appear random are in fact entirely reproducible'.⁵ Noise can be generated as code as well as revealed as damage. Thus the glitch operates both as a proof of the limitations of communication – its encoding – and at the same time as a quality of communication – its ground in entropy. In feature films, this contradiction appears as the paradoxical evidence of the truly mediated status of fictional interchanges. In Tony Scott's *Enemy of the State* (1998) for example, glitches mark the point of view of an omnivoyant surveillance system. Like the Adobe Photoshop lens flare filter, which produces the illusion of a real lens in an unreal image, glitches have become the hallmark of a fictional mediation within a fictional diegesis. The doubling of the mediation produces an effect of authenticity, traceable as far back as the mimicking of long-lens camera snooping in *Citizen Kane* (1941) that Garret Stewart refers to as 'authentication by disrepair'.⁶ In *Enemy of the State*, the extra layer of mediation provided by the glitched surveillance images mimics a primary mediation, one effect of which is to present the deliberate and supplementary damage to the image as if it were a natural effect of filming, so providing it with the (pseudo-aleatory) feel of documentary authenticity.

In archival handling of film, disintegration of the image is evidence of the integrity of the medium itself as inhabitant of history. We can gauge the authenticity of a particular print by the scars left on it by its travels through the years. The deliberate production of glitches is a different matter. Filters that allow editors to add dust, hairs, scratches and other damage to digital video files produce exactly the kind of predictable glitching of video signals that Manon and Temkin are concerned about. Common in experimental media like structural materialist film, such experiments would include many effects undertaken for mainstream film, such as heads-up displays and data overlays. They are in this instance no longer either instances of technical irruptions from within the operating systems, hardware and software of machines, nor of either ontological or communicative noise, but of labour.

Rosa Menkman distinguishes ‘hot’ and ‘cool’ variants of glitch as deliberate labour on the image.⁷ A hot glitch focuses on producing an end product which satisfies some aesthetic criteria: she gives the example of Nabil Elderkin’s 2009 video for Kanye West’s *Welcome to Heartbreak*. Cool glitch, on the other hand, is a process, an exploration. Menkman’s taxonomy sits on top of an older one that distinguishes intentional from accidental, where the intentional is ultimately instrumental while the accidental involves at the very least a share of creativity taken up by either natural processes or technologies or both. The instrumental, ‘hot’ glitch, with its restriction to the human, is a work in which work itself is evaporated, subsumed into intention, while excluding also the labour of the technology (Marx’s ‘dead labour’) and of natural processes, here electricity and the electro-magnetic spectrum. Cool glitch re-engages technology and nature as partners in creation.

The surface of a physical photograph is vulnerable to the grease on fingertips, its meniscus marked with the identity of those who have touched it. A digital image pretends to absolute autonomy from its making and its passage through time. By excluding itself from history and divorcing itself from life, it aspires

to the purity of a wholly rational existence. But if it were possible for digital images truly to separate themselves so absolutely from time, they would be empty. This is indeed a possibility: that they persist not as images but as code, in which case they are dependent on specific software for their display, and to that extent ephemeral. Asserting this dependence, glitch denies to digital artefacts the autonomy that would destroy them. This contradiction between autonomy and dependence is however not resolvable in a synthesis in which freedom is necessity. Rather the two co-exist in the mutual antagonism expressed in glitches, constantly threatening the progress of digital rationalism towards completion through a glitch that turns them into sites in which they work and are worked upon by human, non-human and no-longer-human *living* labour.

Since the technical media, from clockwork to Herzian cycles, rely on repetition, they also congeal in their particular assemblage not only of the repetitions of natural laws but of the *dead* labour of factory discipline. In Shannon and Weaver's proto-cybernetic theory of communication, repetition is a form of noise and hence of entropy, allying technical and natural repetitions with the entropic function of Freud's death instinct. Thus the model of the archive as site of eternal repetition of the same allies itself with a necessarily noise-generating and entropic system which, to that extent, excludes the human from its ideal operation. This is why the work of the archive always interrupts pure repetition. Glitches similarly disallow pure repetition, in which time is erased from the equation, because whether they arise at the moment of representation, of storage or of transmission, they are always temporal phenomena. Against the indifference of repetition they assert 'the difference that makes a difference in a later state of affairs' by which Gregory Bateson defines information.⁸ Moreover, glitches, whatever their provenance, are also phenomena perceptible to the three phyla, human, machinic and natural.

In this they differ from nature as it exists now for technical purposes: as

source not simply of raw materials but of data. The becoming-data of nature – already externalised and alienated as environment – is stripped back in digital reason to numerical symbols. The pattern-seeking predisposition of digital reason leads, in a second stage, towards averaging out the exceptional, which is excluded from communication under the label of noise. As a general rule glitches can only work on this second operation, reasserting the numerically exceptional in order to reveal the normative techniques of domination, but without being able to crack open or sabotage the arithmetic principle on which it is founded. To the extent that it concerns only the recording of the numerical measure of phenomena, not the phenomena themselves, the statistical functioning of digital reason is invisible unless actively visualised, unheard unless sonified.

This is why the perceptible nature of audio and video glitches is in the end more than simply a punctuation of norms. Their liminality operates between the smooth, insensible operation of numerical code and the eruption of code into sensation. Not itself a site of meaning, the glitch exposes the asignifying code underneath the symbols constituting not only digital presentations (films, images, music . . .) but of the world, the human, technical and natural environments, as constituted in the form of pure data. Nor is it the site of pure difference, from which meaning might arise. On the contrary, to the extent that digital reason runs precisely on the measurement and manipulation of difference, the glitch reveals the pure *indifference* underpinning the logic of exchange on which it is founded. In the first instance, the labour of the glitch is legible as a work of undoing the exchange relation as it dominates conceptions of digital communication, and specifically of the reduction of nature to communication and norm in digital rationality. In the second, as *limen*, it mines the rift between sensible and insensible to expose the indifference on which their distinction is based, and with it the grounds of the ascendancy of abstraction over the actual in the operation of the Market.

As labour, glitch operates then as a form of *aletheia*, revealing, which however

reveals not being but indifference in the threshold between perceptible and imperceptible. Like any labour, to be worthwhile it must be useful. The use-value of those glitches that are knowingly produced as specifically human labour is simply to emulate accidental glitches. Alternatively, they can produce deliberate disruptions, recruiting the contingent labour of physical (natural) and technical processes as collaborators in the work. The first of these categories, the emulated glitch, foregrounds mediation in order to materialise it in the diegetic world of the narrative. In this case it extends the realist project of persuading audiences of the materiality of the world they see represented. In the second category, which I will refer to as collaborative glitch, the foregrounding serves as interruption of exactly this realist project. The remaining question concerns whether the accidental, unplanned glitch, the work of both natural and technological agency, can in some sense be said to involve useful labour.

Some glitches configured in the production process are undoubtedly human labour, oriented towards the semantic plane even if they work towards disrupting it. It is in the working life of media artefacts and in the archive that the bulk of accidental glitches occur – the scratches and physical imperfections acquired through transmission and display, and the dust and electro-magnetic scars accumulated in storage. In these instances, I want to argue, physical and technological processes constitute labour on the body of the film, a labour whose first task is to establish the impermanence of the film. We think of exhibition – in the broad sense covering all audiovisual media – as a showing of the integral work, or something as close to it as circumstances allow; and of the archive as an institution dedicated to maintaining that integrity. Actually every screening places demands on the materials involved, including digital packages, to the extent that lower-quality showprints were the norm in the celluloid era, while the maintenance and operation of projectors, lenses and screens today is often marginalised in the theatrical cinema business. Meanwhile, every archivist knows that they must prioritise available funds for specific projects, and must frequently make the decision to abandon the historical artefact (celluloid, tape, file) in favour of digitised

documentation of it, a process that always involves loss, and indeed the creation of new effects occurring at the interface between different material substrates, formats, operating systems and codecs. Many of these effects are unwilling, accidental, unavoidable. They become integral to the new form archived works take, just as conditions of screening overdetermine the presentation and therefore the experience, the phenomenality, of film, TV, video and digital visual works. As Renate Ferro and Timothy Murray suggest, we are best understanding these processes in terms, deriving ultimately from Freud, of a work of forgetting that is integral to the work of remembering. To remember is always to recall otherwise: a relationship to the past rather than a more or less accurate statement of it, arising 'from within the legacy of ruptured teleologies, whether the forgetful field of what Derrida understood as the erasures of archival fever, or from what Foucault applauds as the modifying thickness of archival accumulations'.⁹ A first useful labour of collaborative, natural and technological glitching is to promote forgetting, and to integrate forgetting into the fabric of the texts and objects in the electronic archive.

Among many uses of glitches in recent cinema, many indicate a pseudo-realistic account of long-distance communications, as in *Interstellar* (2014), while others communicate plot points, such as the transmissions from the orbiting Tet in *Oblivion* (2013). Imaginary media, such as the holograph in the first *Star Wars: A New Hope* (1977), frequently display glitches, intended to communicate archival, experimental or endangered transmission. All of these characteristics are involved in the trans-temporal medium at the centre of the plot for Tony Scott's *Déjà Vu* (2006). Agent Doug Carlin is investigating a bomb on a New Orleans ferry when he is invited to join a task force using a new device capable of viewing the past. Following a lead, he falls in love with Claire, whose body has been identified at the scene, but who he can watch through the Snow White device. Scott's effects team used lidar ('light radar'), a system using beams of light to measure relative distances, rather like the laser tape measures used by real estate agents. To create the effect of a 3D medium capable of peering back into a specific but unstill moment in the past, the team combined lidar recordings of the spatial dimensions of key locations

and actors with the use of a then state-of-the-art HD camera, the Panavision Genesis, to give the footage applied to the lidar data an aura of hyperrealism. Scott was notably interested in retaining many of the artefacts produced by these technologies, including 3D stutter, ghosting and smears, and in the artefacts generated by combining them with both HD cinematography and still-camera rigs of the kind used in *The Matrix* (1999) (DiLullo 2006) which he preserves into the final composites in order to create a hallucinatory impression in the cinema audience of a second mode of vision within the otherwise realist diegetic cinematography of the detective-protagonist's present.

Scott's film is especially interesting because it deals with the temporality of seeing, so deeply encoded in both cinema as recording and television as live broadcast. The phenomenon of *déjà vu*, which Paolo Virno (2015) describes as 'memory of the present', gives us the uncanny sense of having lived a moment already, at the point when we are experiencing it for the first time, in a process in which we experience both the moment and its representation as memory simultaneously.¹⁰ The uncanny arises because of the doubt it places in us that the present as we normally accept it is not-present or already over. Those who suffer *déjà vu* constantly report a terrible dislocation from this eternal non-present presentation. For Virno the phenomenon operates as a metaphor for the dislocation of our conjuncture in history. In Scott's *Déjà Vu*, that dislocation operates as a liminal terrain through which the protagonist will be able to rescue the girl and stop the bomb.

In the first encounter with the Snow White program, which allows operators to look at a travelling moment in time always four days and six hours in the past, we shift from ultra-rapid pans round a New Orleans ferry, the scene of the bomb plot, via a montage of satellite and GIS images, to the lidar-scanned interior of a New Orleans apartment, its walls part data-cloud, part photographed. Inside the apartment, the second protagonist, Claire Kuchever, is presented in a similarly complex mode, assembled from a variable density of

lidar data points and interpolated imagery from a still camera array to provide a 3D portrait. The audience already knows, like Agent Carlin, that Sara is dead in the diegetic present. When, after a cutaway to Carlin, we return to the Snow White imagery, we see a ghostly extension of her movements through the room, like those left on photographic plates by movements too quick for the shutter. Most crucially of all, to establish the bond between living and dead, Sara's Snow White screen image then fills half the actual screen, with Carlin in the other, both sides speckled with reflections of highlights from the laboratory set.

At 57'40" another lidar sequence establishes the police headquarters in the past. Watched in slow motion or in screen grabs, the image is a bewildering version of a glitched CAD/CAM or Google Street View screen, an exploded architecture of partially transparent, partially wireframe and partially data point visions which, after two brief moments when the image and sound crashes completely, resolves into a quasi-photographic rendition before we switch to a steadicam account of the dialogue scene between Carlin and his partner in the past. For the antagonist, the past is origin and therefore destiny; in these glitches we see into the past as raw material, as a potential only some of which is realised. If on the one hand the narrative is a rewriting of the Orpheus myth in which Carlin goes back to rescue Sara from death, on the other it concerns the structure of obligation, which concerns the relation of what should to what must be repaid: relations of debt. In the normative structuring of time now dominated by the construct of debt, the present owes the future. In the case of *Déjà Vu*, then, logically Sara's past owes Carlin's present. But that is not how it appears to Carlin. To him, his present owes a debt to her past. In what sense do we owe the past anything? Because it was the past that formed the actuality of our present. We are, in Benjamin's sense, the posterity whose task is to justify the sufferings of the past. Beyond that, the 'dead labour' of our ancestors is the technology we use today: the fictive technology of Snow White and the real technology of cinema. The crashed imagery through which Carlin perceives the past and ultimately remakes it, exchanging his death for hers, is a direct image of debt as it runs counter to

its current construction, in which the originary loan institutes a condition of permanent and unpayable debt. This is the formative structure of the Market's construction of time as destiny, and it is this temporal artefact, this normative governance of time, that is glitched in the sequences where location, persons and events pass into a hyperreal hinterland. Rather than perceiving himself in action, Carlin becomes the spectator of his actuality, a condition parallel to that of the debtor. But the magic Snow White medium depicted in the glitch sequences allows him to restructure debt as what the present owes the past rather than what the past owes the future, while simultaneously freeing him to become an actor rather than a mere spectator in his own life. The trajectory goes from spectacle to action, from imprisonment in a state of debt to the construction of a means to repay it.

By these means debt, which has always played the role of representation, that is as a deferral of presence, is converted into presentation, in which debt's temporal structure, as representation of a subject position and a fixed value which however accumulates interest to the extent that it is never payable, is paid before it is established, creating then a presence which can be the basis for a future other than that of the destiny debt creates for the indebted. Ethical obligation operates across this temporal disjuncture, as the shadow of debt as the dominant regime of time today. The word 'debt' has more than one valence. Positively, we feel gratitude to parents, teachers, friends and say we owe a debt to them. Negatively, we feel shame and anxiety about owing more than we can pay. The poor are taught to be ashamed of their poverty. Debt as condition is a positive human experience – the debt to mother Nature – and a negative instance – the debt crisis of 2008. In its positive form, it binds us to the social, but in the negative ejects us from the social emotionally and legally. It is an instrument that ties us to time: the debt incurred today we promise to repay in the future. In the era of financialisation, debt unties the social bonds to past and present and commits us to future repayment. But the condition of finance capital is that that future is endlessly deferred. Debt financing is premised on the principle of interest, so that we obtain credit only on condition that we continue to pay interest without ever coming to that

lonely hour of final reconciliation that never arrives. To the extent that finance capital is the purest form of the perfection of communication, the glitch erupts as an insistence not only on the material substrate, not only on entropy, but on the absolute priority of the present. As presentation rather than representation, as signifier only of its own existence, glitch is able to escape the permanently deferred arrival of a representation at the precise place of its referent. It is capable, therefore, in a rather specific sense explored by the the Swedish critic and curator Pontus Hultén, of becoming a symbol.

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Writing in the pages of the review *Kasark* in the mid-1950s, Hultén proposed that the age of representation was over, that contemporary art had to present itself instead as object in the world, and therefore proposed that ‘chance enters as a symbol for the tie to reality in which contingency rules’.¹¹ Reality is here defined as the zone of contingency, which has the double weighting in English of randomness and of being contingent upon, that is of being caught inside causal networks. To call this practice ‘contingent’ has the double sense of relinquishing control in favour of accident – the kind of accident generated in *Déjà Vu*'s constructed glitches, and at the same time permitting natural and technical processes to enter into the creative work of art-making, the kind of pure accident that Menkman seeks, and which becomes possible as films travel through both transmission and storage. Secondly, such chance procedures are points of entry, in which chance acts as symbol. ‘There is no model for the one who is seeking that which he has never seen. The pictures that are symbols for the reality he wants to construct cannot be restricted to space or time. The symbols for his freedom have to be even more liberated than he himself has the power to be’.¹² Hultén embraced cinema as he did kinetic art as machines which already are capable of generating symbols, and indeed of being symbols in themselves in their entanglement in chains of contingent causes and effects. Their strength is not only that they are autonomous of institutional, or indeed of human constraints, but that that autonomy allows them to act as symbols, that is, as things which act back on the human, but from outside it. This reciprocity between human and non-human actors is a distinctive feature of modern art, which began to

incorporate real objects in place of representing already before WWI, during which conflict however collages of found objects began to crack open the civilisational claims of the representational. At the same time, cinema operated as a system for discovering found objects ('scenes') and montage a means for constructing alterity from the ostensibly integral moments seized in the shot: a system for revivifying the symbolic order of industrial modernity by using its own technical *dispositif* to create means for extra-human intervention in the processes of meaning-making. To break the unity of the screen-image system through the materiality of segmented flow is the revenge of the rationalized on their rational progenitor.

What results is an unsettling of the work, 'definitively unfinished' as Duchamp is said to have remarked of the Large Glass after its cracking. Or as Ryszard Kluszczyński says of hypertext, 'the ultimate object of analysis is not the work itself . . . but the field of interactive artistic communication, where the work, along with other elements (the artist, the recipient/interactor, the artifact, the interface) becomes entangled in an intricate, multidimensional complex of communication processes'.¹³ What in Duchamp is still an authorial statement, subordinating technical and natural processes to the overarching control of the artist, moves in Hultén to a liberation of the artist from himself, and in hypertext as Kluszczyński sees it to a liberation of the artwork from the very object status which, for Hultén, was the means to human liberation. Kluszczyński marks the integration of the artefact and the interface, as technologies, into creation; what remains to be undertaken is the integration of nature. Yet Kluszczyński is correct in implying that the resulting communicative nexus is not in fact integrated into an artistic whole but completes the move from representation to presentation by alleviating the work of the burden of presence. We have only to add the presence of air, dust, ambient daylight, exhibition acoustics, machine noise or microbes to begin to understand the full complexity of the unintegrated work as work continuously undertaken by multiple agencies. The collaborative glitch operates in this becoming of the work. It acts in those works that present themselves as both authorial and complete to indicate that neither attribute is stable: that it is not

only the human interpreter who is active in the art experience but the work too. In *Déjà Vu*'s moments of real synthesis between image regimes, notably between lidar and cinematography, are intimations of the possibilities for inter-medial communications exclusive of human intervention that open up the possibility of a more-than-human communicative regime.

At the same time it is worth noting Wolfgang Ernst's warning that

the unexpected corresponds to the disturbance that is television proper: the paradoxical structure of the medium demands extraordinary events that can appear only within the ever-same schematics; live broadcast would then be the condition of possibility of disrupting an otherwise imperturbably streaming flow. . . . It is precisely [such disturbances'] exhibition within their own genre that makes the paradox of television as a medium apparent: constantly having to provide the unexpected.¹⁴

Like Kluszczyński's hypertext, broadcast television is not an object but a communicative nexus, dedicated to homeostatic regulation of difference. In the authoritative mode of broadcasting, in which continuous transmission takes precedence over all other priorities, the glitch provides evidence of the ongoing event of television: even in its failure, TV manages to continue. It carries on through the glitches, assimilating them into its regime of onward flow and indifferent differences. The deployment of glitch, either in fully digital cinema productions, or emulating electronic media in analog film, runs counter to this ideal, premising both perceptual values and narrative turns on the fact of interruption. This is not however the end of the story. The art world is even more devoted to shocks and innovations, all of which function smoothly within the ever-expanding sphere of art's sophistication, its ability to assimilate *n'importe quoi*.¹⁵ The disruptions themselves are part of the continuity, the homogeneity, of art, broadcast and popular culture in the era of the Market.

This is the point at which Hultén's insistence on the symbol becomes invaluable. The symbol is not a signifier, locked into a lexicon and a grammar and severed from its referent or even its semantic signified. A symbol, as Hultén proposes it, is the privileged technical and material form marking the passage from non-human to human. As long as a glitch can be treated as a signifier – when for example it operates as 'authentication by disrepair' – it can be assimilated. When however it marks the presence of mediation as material praxis beyond the human, it becomes symbol in Hultén's sense. Only to the extent that it marks the threshold between human and non-human, contingent reality and system of signification, it is capable of the kind of liberating autonomy Hultén celebrated, and which forms an integral part of the ontology of audiovisual media and the media arts.¹⁶

The symbol belongs not to the presence of the work, nor even to its becoming, but to its latency. In wet photography, the latent image is the state of the exposed frame prior to fixing, which acts as a chemical amplification of the initially very small number of reactions triggered by light reaching the negative. The parallel in digital photography is the stage between the accumulation of charge on the exposed chip and its amplification, digitisation and removal into storage. In computer systems more generally, latency is the time taken to relocate any item of data, such as the time it takes to download, or to access a file from a hard drive. As the temporal dimension in any retrieval, including the retrieval of the effects of light through the chains of post-exposure procedures in both analogue and digital imaging, latency parallels the time of perception, which is always in hock to its pasts. Unlike the Peircean symbol, formed in the relation of word to word, but equally distant from Peirce's index, which sees a causal relation between referent and sign, Hultén's symbol is the actual presence of some thing, whose actuality is a matter of its contingency vis a vis human temporal structures – of syntax and of debt among them. Hultén's symbols are always irruptions into a lexicon that bring with them evidence of its externalities and therefore of its incompleteness. Among those externalities, the temporality of perception draws on both remembrance and forgetting, misremembering and misforgetting. The

glitches of memory defer and disorient when they drag up the unrecalled, in the manner of Freudian slips, jokes and dreams. Such glitches may perhaps draw on upwellings of the animal nature in humans, as accidents in language and signifying systems. They also drag back, deformed, those externalised, and repressed histories which Hegel's Reason triumphed over.

In *Déjà Vu*, the glitch acts as a marker of this threshold over which the contents of the past must be dragged to bring them back into the present, the field of action. The film's fantasy is that the past is merely latent, and that by handling it differently in a kind of ontological darkroom, it can be developed otherwise. To this extent, it confronts the primal fantasy that so often hovers over time travel films with its opposite: the fantasy of bringing the beloved back from the dead.¹⁷ The temporality evoked in the film is not that of the detective investigating the past, but the mythic time of an archetype. Thus what we see in the glitches is at once a mimicry of authentic time (time as the mode of destiny inscribed by debt, where the plenitude of the romantic couple is forever displaced) and at the same time a time of absolute presence, in which the glitch testifies not to the imaginary plenitude of communication or the imaginary permanence of loss incurred as debt, but instead the active participation of the media of communication in communication itself, a participation whose engagement with the non-human is precisely what allows a form of humanity unburdened by negative debt, and therefore capable of the social, can be foreshadowed in the breakdown of efficient, and merely efficient, communication

The glitches we are seeking out here, those stemming from technical and natural processes, are upwellings of contingencies, not only as the noise integral to all technologies, especially those of communication. Those technologies that have become second nature, whose existence is so deeply embedded we no longer perceive them, return in their malfunctioning as evidence of their ongoing exploitation, as the repression of the colonised returns in racist 'jokes' and pornography, or reversed in sports fandom and

identification with film and music stars. Technologies are similarly thematised in contemporary film and television, but equally rarely are the media technologies invited to participate in the production of the audiovisual except as the unseen supports, the screens through which we look rather than active participants in the production of signs. Glitches like dead pixels or the stutter of scratched optical media not only foreground the technical infrastructure but intervene in the production of signification.

It is important then to recognise in Hultén's symbol that signification is only one plane of its activity: the symbol is an act. It has material consequences. A glitch in code, whether its source is human error, natural contingency or technical artefact, changes the performance of the programme: it is performative. It is a kind of feedback loop stitching together the repressed past with the future of the unfolding signification and communication process. It is in this respect the emergence of mediation within communication, where mediation is the primal connectivity of everything, and communication the reduction of mediation for purposes of control (at first for survival, now for domination). At the same time it indicates a concatenation of human and non-human action, the conditions for the existence of useful labour in Marx. To the extent that contemporary communication is enfolded in the operations of Market rationality, the a-subjective glitch is counterfoil to the Market as Subject.

In this it is rather more than sabotage, rather more than a disruption of domination. Because they come from externalities, such a-subjective glitches take on the job of mediating – without communicating – between the dominated and the autonomous orders created by those processes of environmentalisation and externalisation. The natural and technological can no longer be abstracted as environments and externalities from the human *polis* but must be recognised as having their own claims to act – to labour towards producing the common – even as their actions produce differentiations within the common. Therefore as a preliminary conclusion,

while some glitches operate within existing regimes of signification, other glitches – a-subjective, unintentional, accidental and collaborative – are symbolic acts which work towards the common, a renewed mode of mediation engaging human, natural and technological processes in their differentiation. Signifying glitches struggle to normalise the interruption, to sweep past it and assimilate it into a certain normality, even if, in the case of *Déjà vu*, that normalisation crashes into its own internal contradictions to reveal the a-signifying potential in the glitched sequence. In evacuating intention from the flow of signification, accidental and a-subjective glitches on the other hand not only undermine the intentionality of instrumental communication but replace it with another logic which belongs to the autonomous interactions of the common rather than to the undifferentiated and indifferent freedom claimed by the Market. What makes *Déjà Vu* such an interesting exemplar of glitch is that it sets out to deploy such signifying glitches, only to reproduce through them an actual breakdown in communication, one in which the physical properties of the image (and the sounds associated that for reasons of space have been omitted in this analysis) assert themselves through the paradoxes of time travel, as configurations of alternative modes of time. If, as I have argued here, debt is the formative structure of time in the era of financialisation, then *Déjà Vu*, even despite its own status as commodity in the circuit of exchange, and perhaps especially because it does not seek to do so, articulates the communicative and temporal irrationalities, inefficiencies, disruptions, interruptions and breakdowns which debt must ignore in its erasure of presence under the tyranny of an ineluctable but nonetheless endlessly deferred future. To express the paradox of debt as integral to the making of contemporary (inter)subjectivity comes both in the plot's discovery that true debt is not owed to the future but to the other, and in the film's picturing of this paradox as a crisis of communication whose testimony takes the form of a crisis in the image, the critical glitch.

- 1 G.W.F. Hegel, *Reason In History: A General Introduction to the Philosophy of History*, translated by Robert S. Hartman (New York: Bobbs-Merrill, 1953), p. 44.
- 2 John von Neuman, *Theory of Self-Reproducing Automata*, ed. Arthur W. Burks (Urbana and London: University of Illinois Press, 1966).
- 3 Michel Serres, *The Parasite*, Translated by Lawrence R Scherr (Minneapolis: University of Minnesota Press, [1982] 2007).
- 4 Masaki Fujihata, 'Cameras, Augmented Reality, and the Accidental', in *Accidental Tools* (Yokohama: Tokyo University of the Arts Graduate School of Film and New Media, 2014), np,
- 5 Hugh S. Manon and Daniel Temkin, 'Notes on Glitch', in *World Picture 6: Wrong*. Winter, 2011. http://www.worldpicturejournal.com/WP_6/Manon.html
- 6 Garret Stewart, *Framed Time: Toward a Postfilmic Cinema* (Chicago: University of Chicago Press, 2007), p. 51.
- 7 Rosa Menkman 'A Vernacular of File Formats: A Guide to Databend Compression Design', 2010. <http://rosa-menkman.blogspot.co.uk/2010/08/vernacular-of-file-formats-2-workshop.html>
- 8 Gregory Bateson, *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution and Epistemology* (London: Paladin, 1973), p. 351.
- 9 Renate Ferro and Timothy Murray, 'Archival Accumulations as the Erasure of Memory', in Brad Buckley and John Conomos (eds), *Erasure: The Spectre of Cultural Memory* (Faringdon: Libri Publishing, 2015), p. 80; citing Jacques Derrida, *Archive Fever: A Freudian Impression*, translated by Eric Prenowitz (Chicago: Chicago University Press, 1995); and Michel Foucault, *The Archaeology of Knowledge and the Discourse on Language*, translated by Alan Sheridan (New York: Harper Colophon, 1972).
- 10 Paolo Virno, *Déjà Vu and the End of History*, translated by David Broder (London: Verso, 2015).
- 11 Cited in Lars Gundolf Andersson et.al., *A History of Swedish Experimental Film Culture: From Early Animation to Video Art* (Stockholm: National Library of Sweden, 2010), pp. 94-95.
- 12 Ibid.?
- 13 Ryszard W. Kluszczyński, 'From Film to Interactive Art: Transformation in Media Arts', in Oliver Grau (ed.), *Media/Art/History* (Cambridge MA: MIT Press, 2007), 223.
- 14 Wolfgang Ernst, 'Between Real Time and memory on Demand: Reflections on Television', in Jussi Parikka (ed.), *Digital Memory and the Archive* (Minneapolis: University of Minnesota Press, 2012), pp. 105-6.
- 15 Thierry de Duve, *Au nom de l'art: Pour une archéologie de la modernité* (Paris: Editions de Minuit, [1989] 1998).
- 16 It is possible that media arts are distinguishable from contemporary art by their surrender of agency to non-human forces; and by their commitment to working within certain frames of materiality (film, video, network). Contemporary art of the *n'importe quoi* celebrates indifference as the *summum bonum* of pointlessly proliferated difference. It is the perfect market, in which anything can be exchanged under the token of universal uniqueness – in this the high-cultural expression of the cultural configuration of Facebook. Media arts, retaining the respect for materials that art abandoned along with modernism, foreground the commonality of their frames and supports – screens, interfaces, code – in order to propose a commons unavailable to the exchange structure of contemporary art, which can only imitate it, as in Bourriaud's relational aesthetic.

17 Constance Penley, 'Androids and Androgyny', *Camera Obscura*, Fall 1986 5(3 15), pp. 36-65.?